
2.0 PURPOSE OF AND NEED FOR ACTION

2.1 INTRODUCTION

Chapter 2.0 describes the location, scope, and planning background of the Hennepin County LRT System. It also outlines the regional transportation policies, goals, and objectives, highlighting specific transportation policies most relevant to light rail transit; the benefits that the LRT system would have on the regional transportation system; and the need for the proposed project.

2.1.1 Project Location

The proposed project involves the construction of a light rail transit system (LRT) in Hennepin County, Minnesota. The LRT system would include 33.9 to 35.55 track miles, and a total of 41 to 44 potential station stops, serving the Cities of Minneapolis, Bloomington, Brooklyn Park, Crystal, Golden Valley, Hopkins, Richfield, Robbinsdale, and Saint Louis Park. The range in total route miles and station stops reflects the alignment alternatives considered in the Central Area. Figure 2.1 illustrates the LRT System alignments and study area.

2.1.2 Project Description

The Hennepin County Regional Railroad Authority (HCRRA) proposes to build a light rail transit (LRT) system for Hennepin County. The proposed LRT system is comprised of four corridors, each of which radiates from downtown Minneapolis. The specific corridor boundaries are as follows:

- o University Corridor: Downtown Minneapolis to Oak Street/Washington Avenue
- o Hiawatha Corridor: Downtown Minneapolis through the Minneapolis - Saint Paul International Airport, to the Mall of America site at 24th Avenue and 81st Street in Bloomington
- o Southwest Corridor: Downtown Minneapolis to 5th Avenue in Hopkins

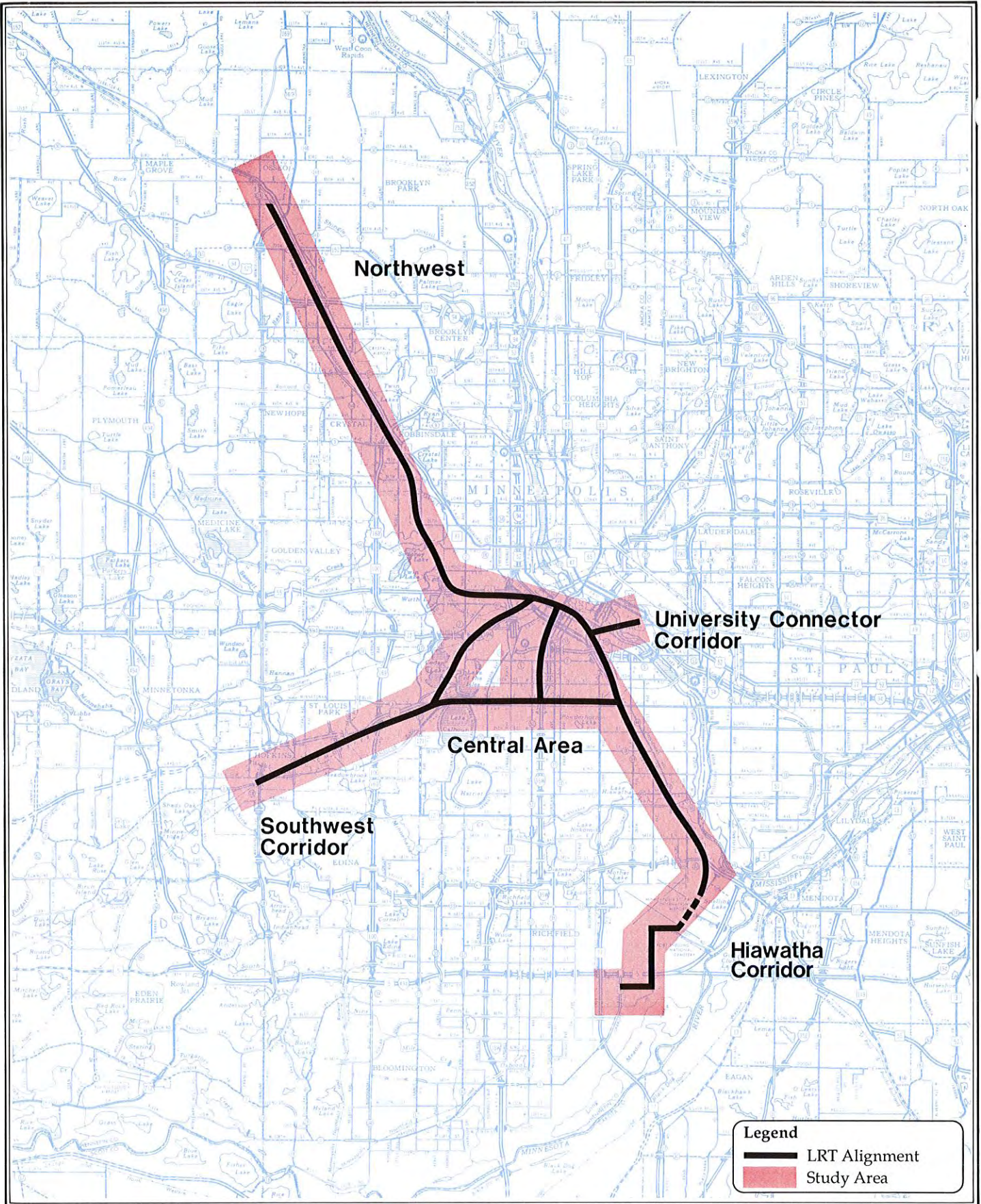


Figure 2.1

- o Northwest Corridor: Downtown Minneapolis to 85th Avenue in Brooklyn Park

Light Rail Transit uses electrically powered, steel-wheeled vehicles which run on steel rails. Power is drawn from overhead wires. The light rail vehicles operate singly or in multiple-car trains on a predominately reserved, but not necessarily grade-separated right-of-way. The LRT system uses articulated vehicles approximately 90 feet in length, 13 feet high and 9 feet wide. The seating capacity ranges from 64 to 76, with a seating and standing capacity of 144 to 162 people per vehicle. The maximum service speed is 55 miles per hour. Right-of-way width is approximately thirty feet (not including stations) throughout the LRT system.

Throughout the development of the Hennepin County LRT System Plan, two basic principles of overriding importance were considered:

- o The light rail transit service must be competitive with private automobiles.
- o The light rail transit service must efficiently serve trips between corridors.

The primary market segments of interest are trips between a point located in one of the corridors and the downtown Minneapolis/University of Minnesota area. Secondary markets include trips with both ends in one or two corridors.

As part of a regional transportation network, existing bus routes will be revised to connect with the light rail system. Feeder buses would provide system-wide access. Other access opportunities would be provided by walk-up, park-and-ride and drop-offs.

To be successful, the light rail transit system must be competitive with automobile travel times and travel cost. This principle led to consideration of alignments which offer relatively fast travel speeds to the downtown/University area, good access from suburban areas to convenient and adequately sized park-and-ride lots or bus transfer facilities, and station facilities at approximately one-mile intervals.

The Comprehensive LRT System Plan for Hennepin County outlines the proposed LRT services within Hennepin County over the next twenty years and discusses potential extensions of the LRT line into the adjacent counties of Ramsey, Scott, Dakota, Carver, Washington and Anoka. All of the corridors in the proposed Hennepin County LRT system were identified in the adopted Comprehensive Plan. These corridors had been previously identified by the Metropolitan Council as candidate corridors for LRT service in the regional Transportation Policy Plan.

The basic alignments for the four corridors are well defined. However, the Central Area consists of three tunnel and two completely at-grade alignment options. They are:

Tunnel Options

- o Long Deep Tunnel: Metrodome to 29th/Nicollet with a Northwest Connection (Figure 2.2).
- o Short East/West Tunnel: Connecting a portal on the western edge of the downtown to a portal adjacent to the Metrodome (Figure 2.3).
- o North-South Tunnel: Portals located at First Avenue North and West River Road, and on the 29th Street/Soo Line Corridor at approximately Portland Avenue South (Figure 2.4).

At-Grade Options

Option A: Nicollet At-Grade (Figure 2.5)

The Southwest and Hiawatha lines would be on the 29th Street Corridor to Nicollet Avenue, where the lines would converge and travel north. The Northwest connection to the north/south alignment options would be via the Burlington Northern right-of-way to Second Street North. The University connection would follow the existing Soo Line tracks to Second Street South.

Option B: HCRRA Alignment Through Kenwood (Figure 2.6)

The Southwest line would be located on former C&NW right-of-way. The Northwest line would connect with 12th Street at Glenwood Avenue. The Hiawatha line would proceed north (from Lake Street) in existing Soo Line right-of-way. The University and Hiawatha lines would converge and enter the Central Area in the vicinity of the Metrodome, where it would follow the Soo Line tracks to Second Street (if connection is at Marquette or Second Avenue), or First Street (if connection is at Nicollet Avenue).

At-grade north-south service options on Nicollet, Marquette and Second Avenue are identified in Figure 2.6.

An LRT maintenance facility with an area of approximately thirteen acres would be constructed. The proposed area is located at the Coach Yard site between I-94 and Franklin Avenue. This facility will provide space for maintenance

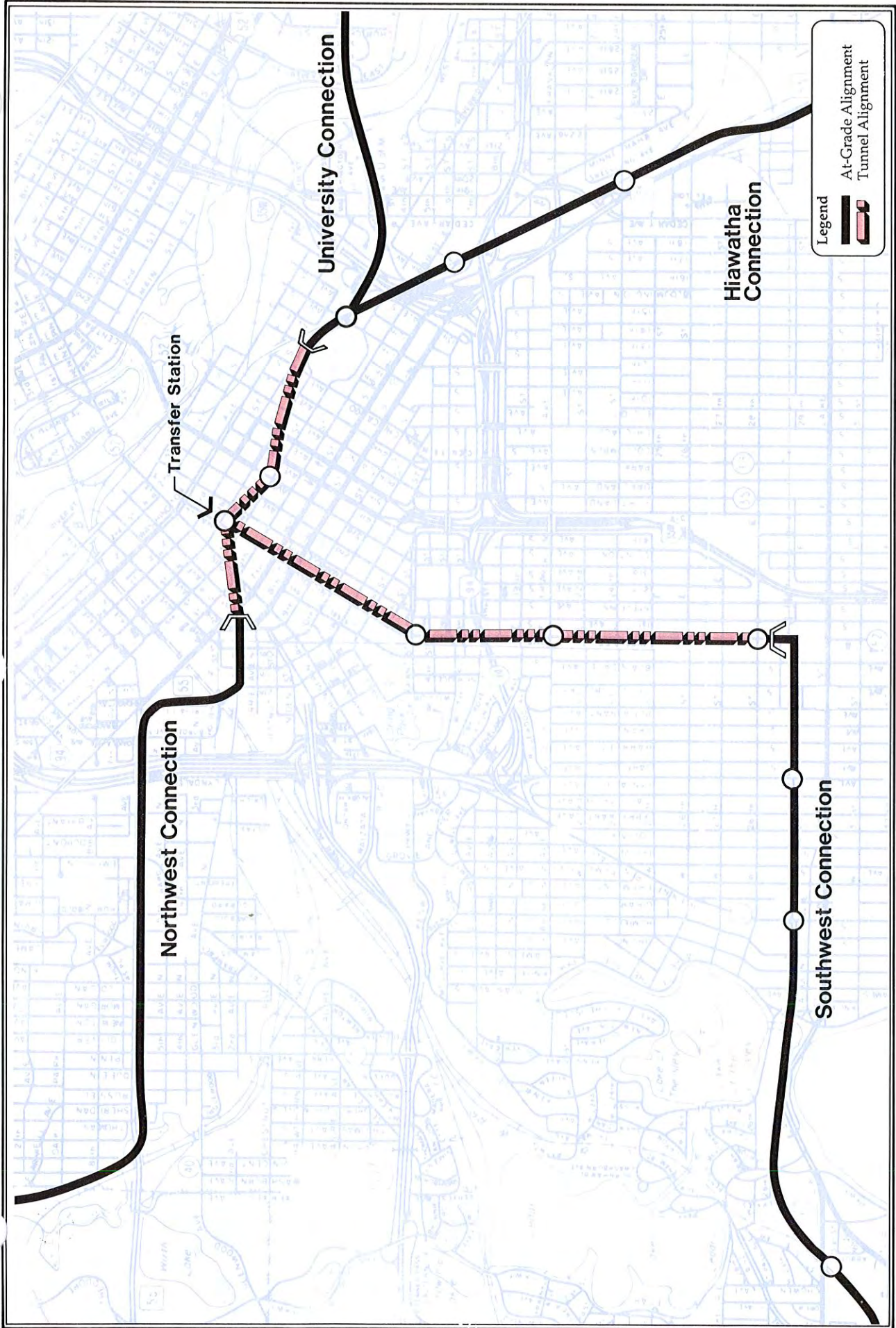


Figure 2.2
Central Area

Tunnel Option A with At-Grade Connections

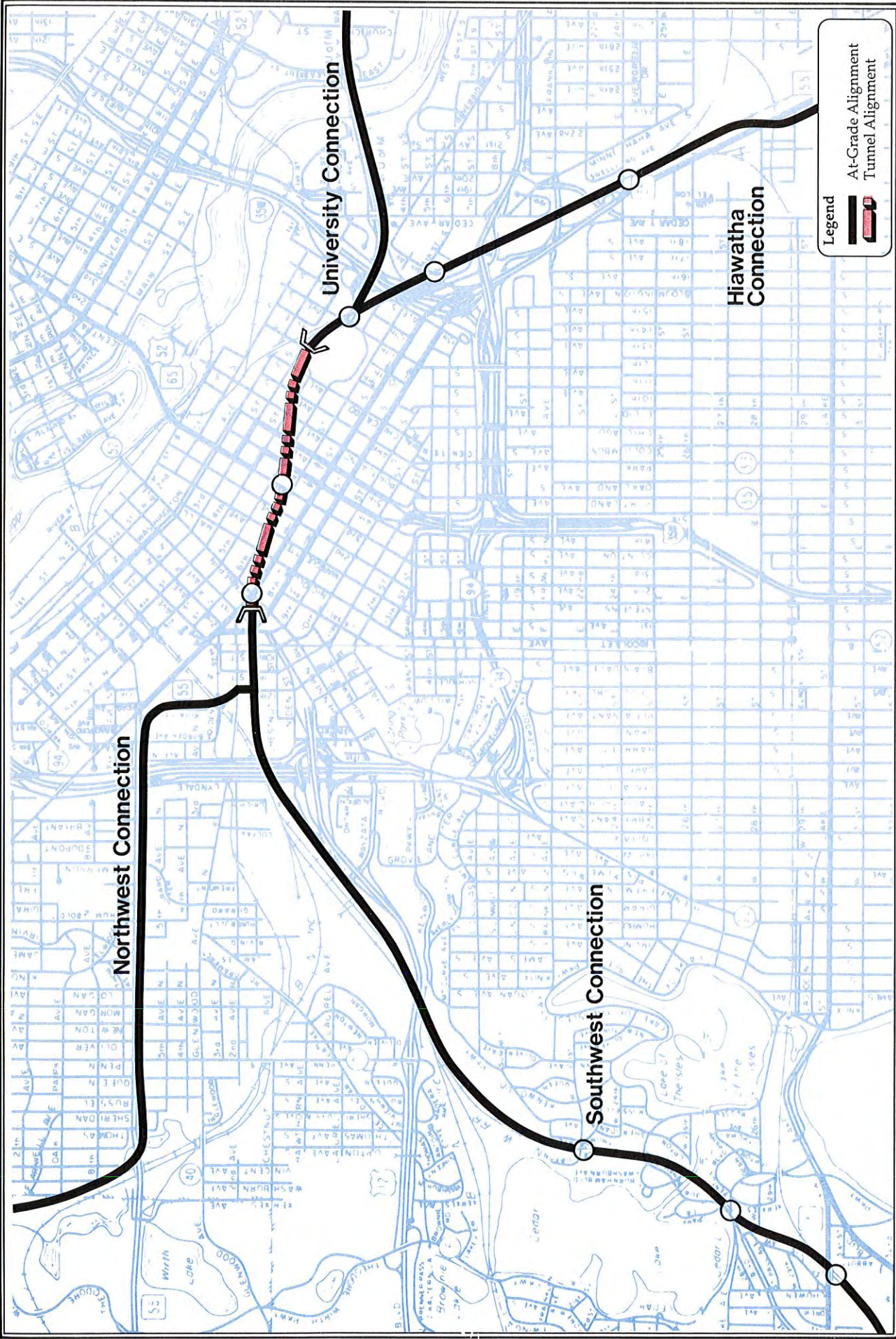
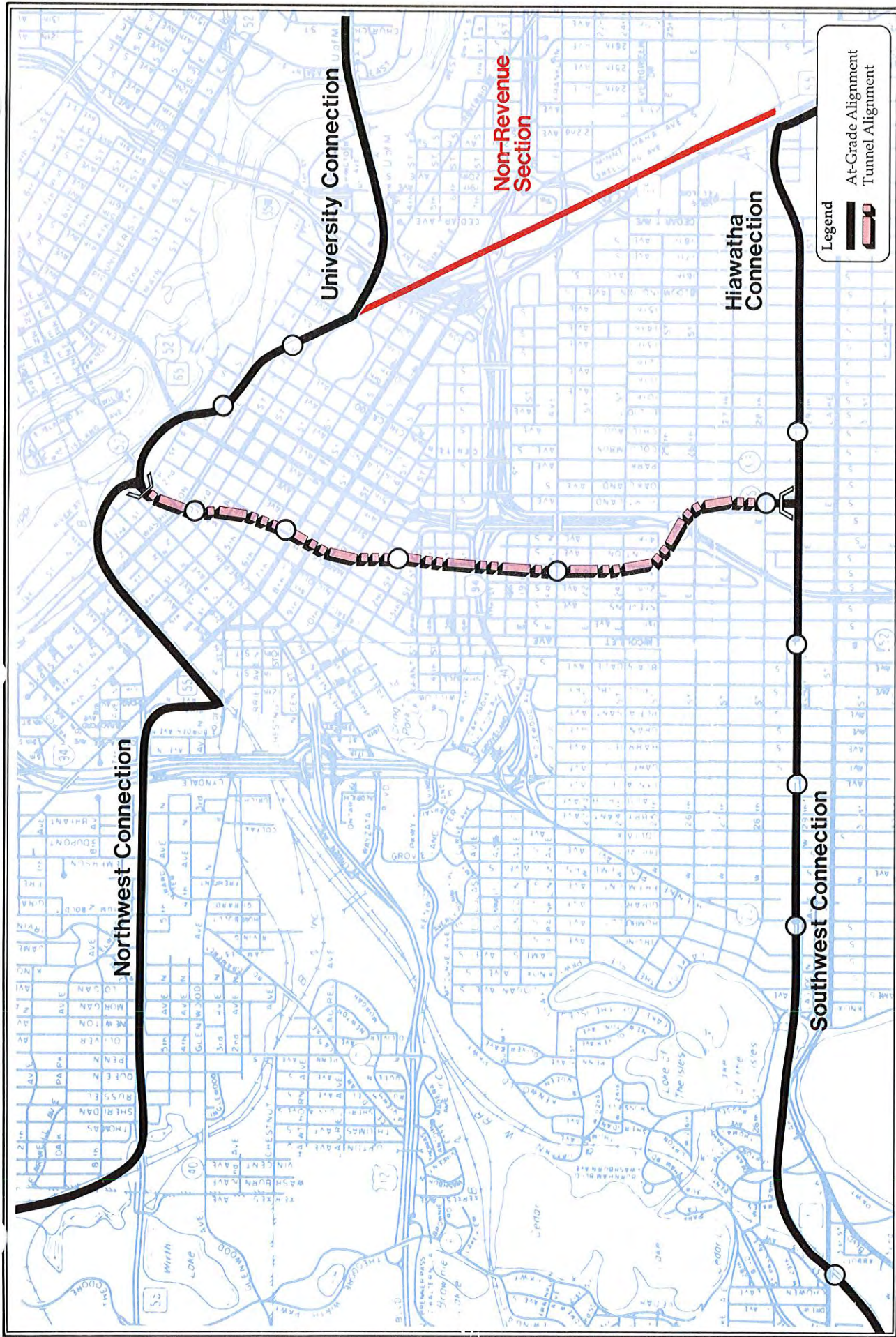


Figure 2.3
Central Area

Tunnel Option B with At-Grade Connections

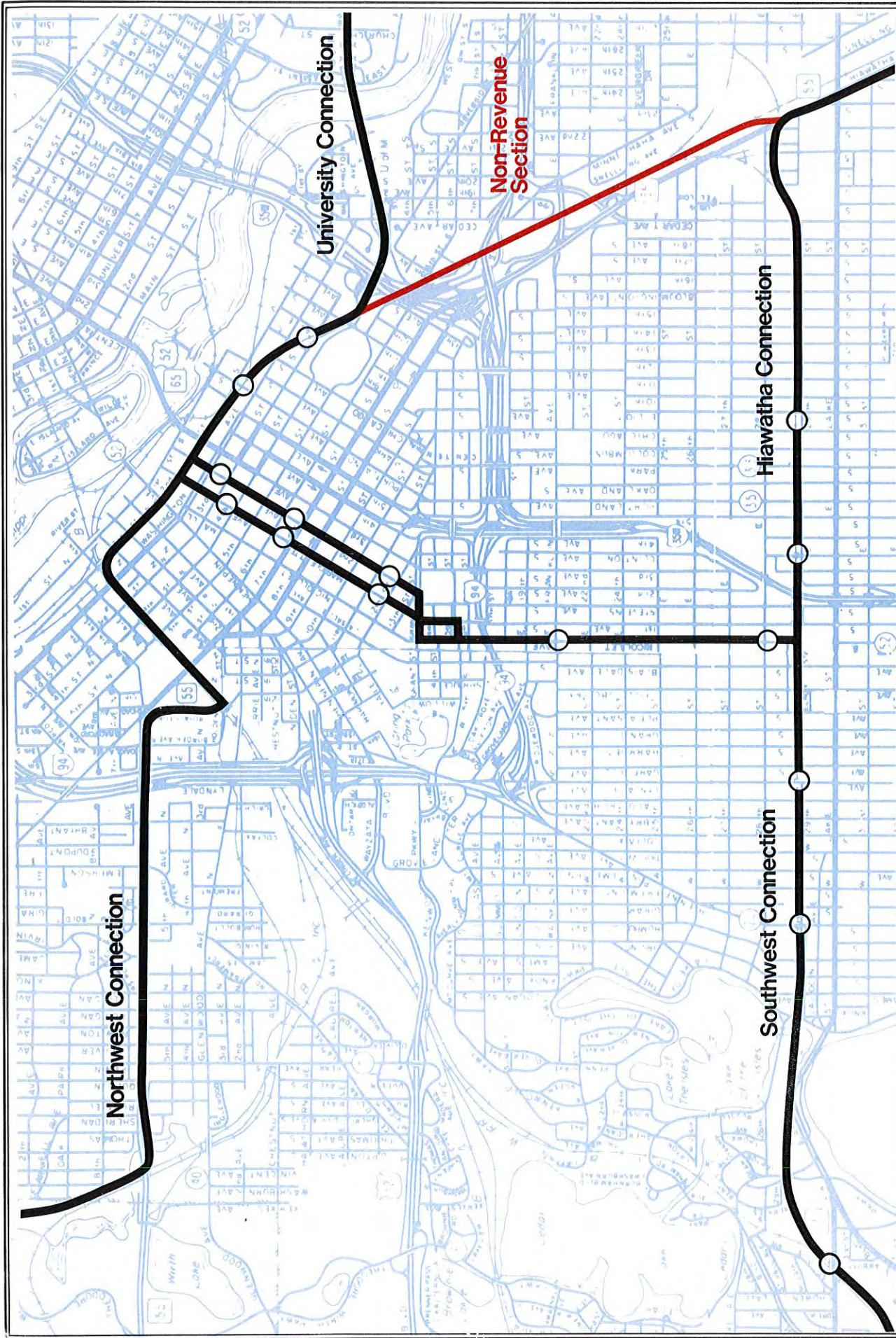


Tunnel Option C with At-Grade Connections

Figure 2.4

Central Area





At-Grade Option A

Figure 2.5

Central Area

HCRRA
Hampden County Regional Railroad Authority

LRT System

Enviro **ntial Impact Statement**



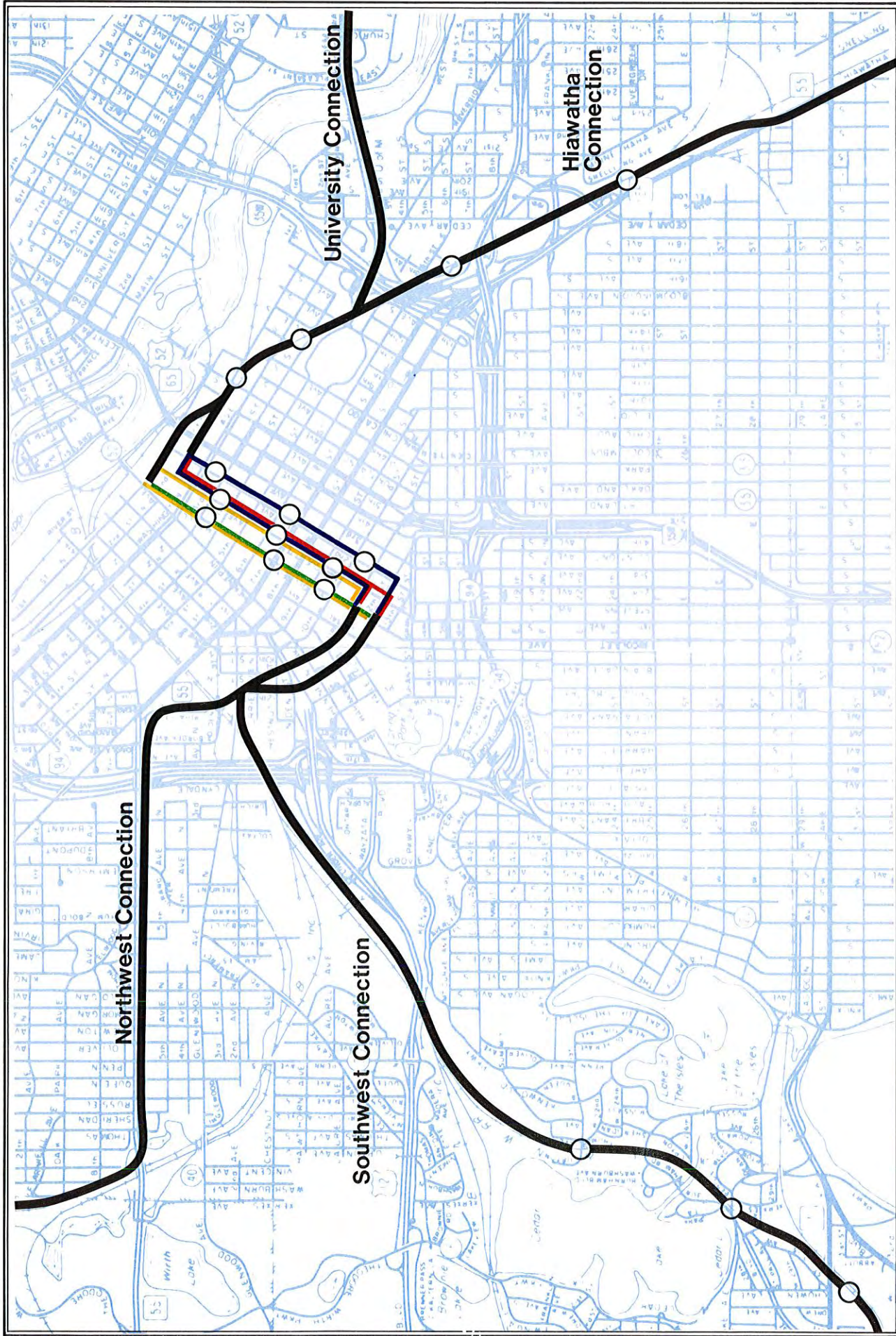


Figure 2.6

Central Area



**At-Grade
 Option B**

and repairs, storage of vehicles, and administrative functions. The Coach Yard site will be constructed under all Central Area Build options.

2.1.3. History of Light Rail Transit Planning

During the past twenty years, a variety of planning studies have been conducted regarding light rail transit systems in the Twin Cities Metropolitan area. Major events and studies that have taken place regarding LRT include:

- o Metropolitan Transit Commission (MTC) sponsored analysis of various technologies, early 1970s
- o MTC - Small Vehicle Study, 1974
- o Minnesota Legislature Prohibition of Fixed Rail Planning, 1975
- o University of Minnesota Transitway, 1976
- o St. Paul Downtown People Mover, 1976-1980
- o Minnesota Legislature Lifts Prohibition of Fixed Rail Planning, 1980
- o Light Rail Transit Feasibility Study, 1981
- o Hiawatha Avenue Location and Design Study - EIS, 1979-1984
- o I-394 High Occupancy Vehicle Roadway, 1982
- o University/Southwest Alternatives Analysis, 1985 (draft)
- o Light Rail Transit Implementation Planning Program, Twin Cities Metropolitan Area, 1985
- o Minnesota Legislature Prohibition of Fixed Guideway Planning, 1985
- o Transit Service Needs Assessment, 1986
- o Long-Range Transit Analysis, 1986
- o Minnesota Legislature Lifts Prohibition of Fixed Guideway Planning, 1987
- o Comprehensive LRT System Plan for Hennepin County, 1988

The need for, and benefits of, different fixed guideway systems has been intensely debated over the past twenty years. The Minnesota Legislature has twice passed a prohibition on fixed rail transit planning for the Twin Cities. The first prohibition was passed in 1975. Subsequently in 1976, the Metropolitan Council Transportation Policy Plan included the following statement regarding LRT: No fixed guideway for the exclusive use of transit (buses and automated and semi-automated technologies) is to be provided for regional and subregional services up to and through 1990.

In 1980, because of rising petroleum prices, patterns of more decentralized development in the metro area, and changing perceptions regarding transportation service alternatives, legislation was passed that requested the Metropolitan Council to "conduct a feasibility study of the use of LRT in the Metropolitan Area." (Chapter 607, Minnesota Laws, 1980).

Light Rail Transit Feasibility Study

The Light Rail Transit Feasibility Study completed by the Metropolitan Council in 1981, narrowed potential corridor options with major travel demand from an initial field of fifteen to four. These four corridors were then studied to assess the feasibility of locating LRT in the specific corridor area. The four study corridors included:

- o Minneapolis West/Southwest
- o Saint Paul--Minneapolis
- o Saint Paul Northwest
- o Minneapolis Northwest

Within each study corridor, alternative alignments were identified based on physical adaptability to LRT, potential ridership and land use impacts.

The results of this particular study were twofold. Specifically, LRT was deemed a feasible transit option in several Twin Cities corridors, and the ban on fixed guideway planning was removed from the Metropolitan Council's Transportation Policy Plan.

Hiawatha Avenue Location and Design Study

At the same time the Metropolitan Council was conducting the Light Rail Transit Feasibility Study, the City of Minneapolis and Minnesota Department of Transportation were evaluating five transit service improvements (narrowed from a field of 120 possible actions) for Hiawatha Avenue. Light Rail Transit was included as one of the five alternatives to be considered in the TH 55 corridor.

The Minneapolis City Council formed the Hiawatha Avenue Task Force (HATF), comprised of residents, businesspersons and labor representatives. The HATF was charged with the responsibility of recommending a preferred solution. Factors such as roadway and transit needs as well as socioeconomic and environmental concerns were considered in the decision-making process. The selected alternative for the TH 55 corridor, identified in the TH 55 (Hiawatha Avenue) Draft Environmental Impact Statement/4(f) Evaluation and Alternatives Analysis, 1982, included LRT as the preferred transit mode.

University/Southwest Alternative Analysis

In 1982, the Metropolitan Council began a transit alternatives analysis for the Southwest and University Avenue Corridors. During this analysis, four transportation alternatives, including a no-build option, were considered for each corridor. In 1985, the Metropolitan Council identified Light Rail Transit as the preferred mode of transportation in the University/Southwest and Hiawatha Corridors. Because the University Corridor contains the highest proportion of transit dependent persons in the region, it was identified as the priority corridor.

Light Rail Transit Implementation Planning Program

The Implementation Study was a joint effort of regional and local agencies. The LRT corridors which were selected for analysis included the Hiawatha Corridor between downtown Minneapolis and the Airport South area in Bloomington, the University Avenue Corridor between downtown Minneapolis and Saint Paul, and the Southwest Corridor along the HCRRA right-of-way to TH 101. The purpose of the study was to address the following issues:

- o LRT construction and operation financing
- o Management of LRT construction
- o Management of LRT operations

Transit Service Needs Assessment

In 1985, the Legislature once again passed a prohibition of fixed guideway planning for the Twin Cities until a comprehensive Transit Service Needs Assessment could be completed by the Regional Transit Board. The Needs Assessment identified short- to mid-range transit needs and services in the metropolitan area. This information would also be considered in development of the RTB's Transportation Policy Plan.

Long-Range Transit Analysis

From 1985-1986, the Metropolitan Council was conducting a Long-Range Transit Analysis to evaluate the need for transit capital improvements along major transportation corridors. In addition, the Metropolitan Council focused on establishing priority alignments within selected corridors. Factors such as congestion, transit ridership, needs of transit dependents and cost effectiveness were addressed in the prioritization process.

Following the RTB's Needs Assessment Report to the Legislature in December 1986, legislation was passed which allowed Regional Railroad Authorities to engage in activities related to LRT. The HCRRA was specifically directed in 1987 legislation to develop a Comprehensive LRT System Plan for Hennepin County prior to implementation of any light rail transit system. In developing the plan, the Authority was directed to consider a minimum of three primary corridors, including a southwest, a northern and a southern corridor. In evaluating the corridors, the Rail Authority was also directed to consider ridership potential of each corridor, cost of development for each corridor and public benefit derived.

Comprehensive Light Rail Transit System Plan for Hennepin County

In June of 1988, the Hennepin County Regional Railroad Authority adopted the legislatively mandated Comprehensive LRT System Plan for Hennepin County. The Plan included the following:

- Twenty-Year Plan which identifies candidate corridors for LRT service. Figure 2.7 presents the plan
- Stage I plan to be implemented within the next eight years. Stage I, illustrated in Figure 2.8, includes 29.1 miles of LRT service in five corridors

Both Figure 2.7 and 2.8 include the Long Deep Tunnel option. As discussed in Section 3.2.2.5.1, this tunnel alignment will be screened from further analysis. It is included in these figures to accurately illustrate the LRT alignments originally included in the Comprehensive LRT System Plan for Hennepin County, 1988.

Table 2.1 presents the characteristics of the recommended Twenty-Year and Stage I plans at the conclusion of the Comprehensive System Plan.

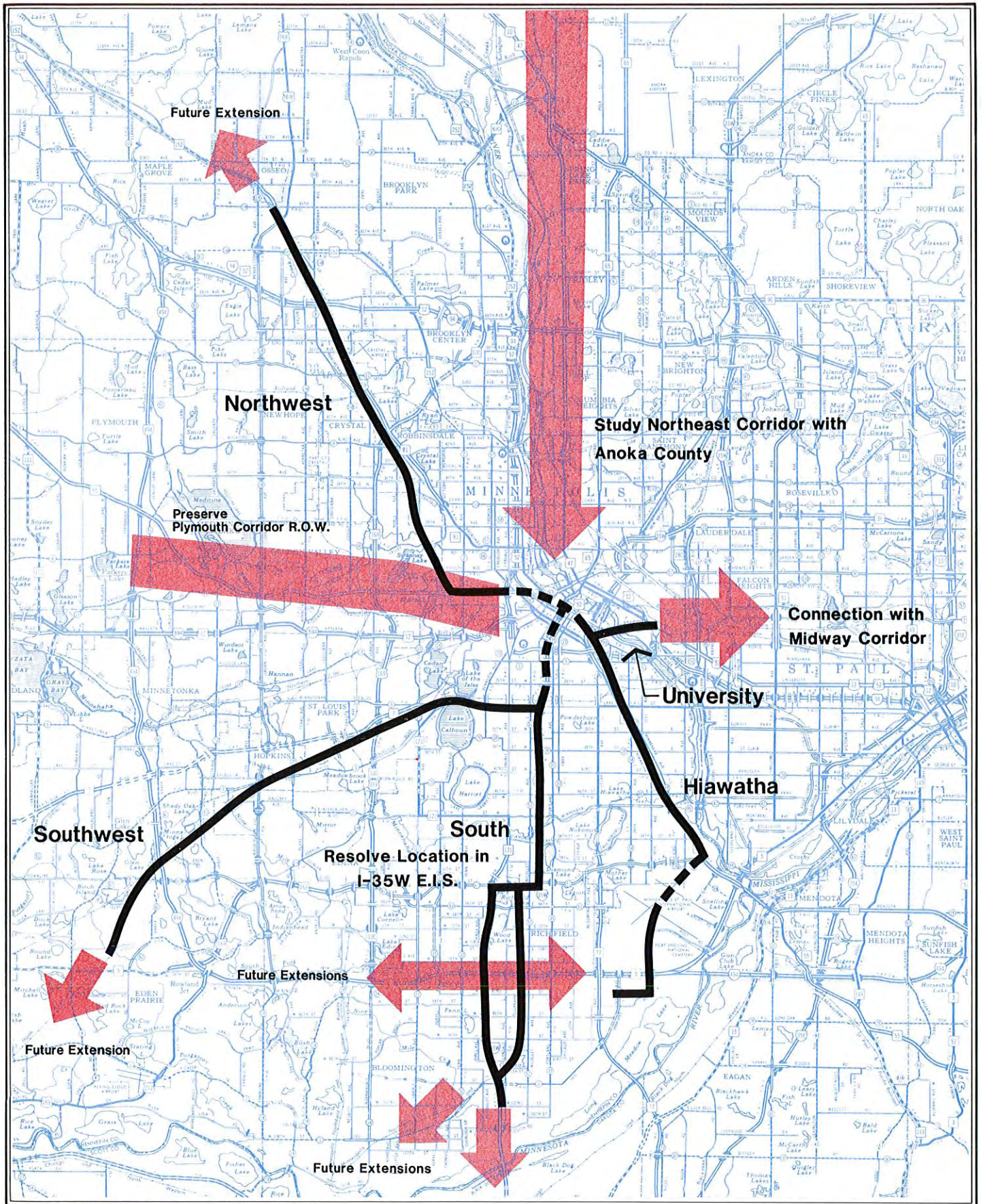


Figure 2.7

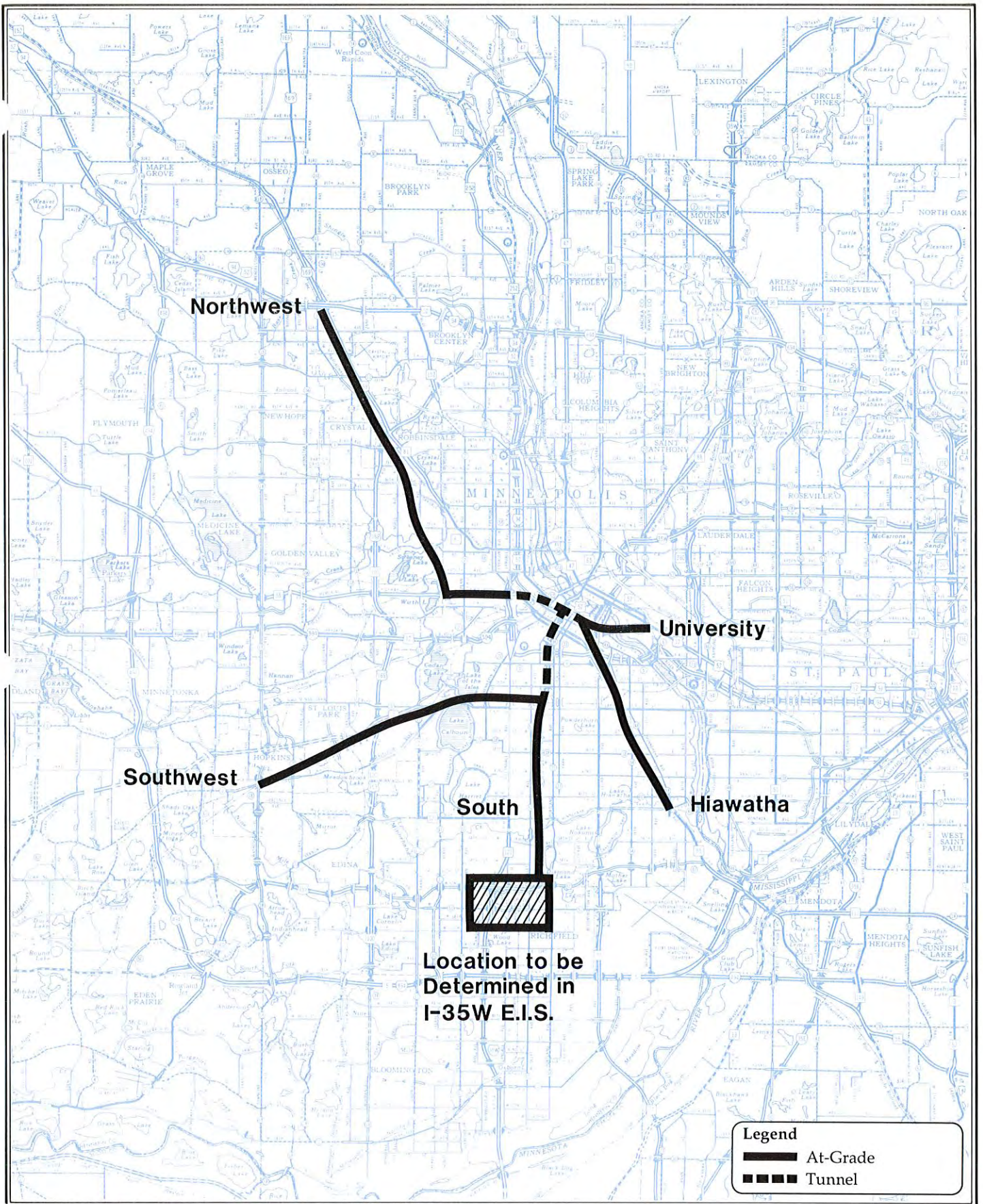


Figure 2.8

SEGMENT	TWENTY-YEAR PLAN			STAGE I PLAN		
	Length (Miles)	Capital Cost (1988 \$ Million)	Daily Ridership Range Year 2010	Length (Miles)	Capital Cost (1988 \$ Million)	Daily Ridership Range Year 2010
Downtown (Tunnel to 29th Street)	3.4	\$138	--	3.4	\$138	--
Northwest Corridor	12.0	139	19,600 - 25,500	9.0	114	18,000 - 23,500
Southwest Corridor	13.5	127	16,600 - 22,000	6.9	71	14,500 - 18,800
South Corridor	10.4	216	24,500 - 32,000	4.4	80	15,300 - 20,000
Hiawatha Corridor	10.0	145	17,300 - 22,500	3.9	34	13,000 - 17,000
University Connector	1.5	40	9,200 - 12,000	1.5	40	9,200 - 12,000
Yards and Shops	--	20	--	--	20	--
TOTAL	50.8	\$825	87,200 - 114,000	29.1	\$497	70,000 - 91,300

NOTE: The capital costs and patronage forecasts will be refined in Preliminary Engineering. The ridership forecasts are based on work reported in the Metropolitan Council report dated December 1986, "A Study of Potential Transit Capital Investments in Twin Cities Corridors" and the results of the Patronage Forecasting Peer Review Committee work.

TABLE 2.1
**Characteristics of Recommended
 20 Year and Stage I Plans**

Source: Comprehensive LRT System Plan for Hennepin County, HCORA, June, 1988.

Twenty-Year System Plan:

The Twenty-Year Plan adopted in June 1988, recommends light rail transit in at least five corridors in Hennepin County. These corridors are:

- o Northwest Corridor to 85th Avenue North, with possible future extensions
- o University Corridor serving the University of Minnesota with extension to the east to be coordinated with the Ramsey County Regional Railroad Authority
- o Hiawatha Corridor through the Minneapolis-St. Paul International Airport to the Mall of America site in Bloomington
- o South Corridor through Richfield and into Bloomington, with extension to the south to be coordinated with the Scott and/or Dakota County Regional Railroad Authorities, and with possible extensions along the I-494 corridor
- o Southwest Corridor through Hopkins to Eden Prairie and with an extension to Chaska to be coordinated with the Carver County Regional Railroad Authority

In addition, the Plan recommended to study LRT service in the Northeast Corridor in cooperation with the Anoka County Regional Railroad Authority. This work has recently been completed.

Each of these corridors had previously been identified by the Metropolitan Council as a candidate corridor for LRT service.

Stage I System Plan:

The Hennepin County Comprehensive Plan identified a Stage I System Plan. The Stage I System Plan proposes 29.1 miles of LRT trackage.

The advisory committees involved in the planning process concluded that the Stage I System:

- o Is a viable LRT project
- o Meets one or more significant travel needs
- o Demonstrates the benefits of LRT
- o Is within the financial capacity of the HCRRA
- o Is buildable within a six- to eight-year time frame

To arrive at a Stage I System, the Technical and Intergovernmental Advisory Committees screened over fifteen distinct Stage I scenarios. All scenarios included the system core: the downtown Minneapolis section, the yards and shops facility, and the University Connector. In addition, each scenario included all, or portions, of each corridor. Scenarios were evaluated and compared on criteria such as:

- o Daily patrons per route mile
- o Patrons per vehicle mile
- o Capital cost per route mile
- o Annual capital cost per patron
- o Operating and maintenance cost per patron
- o Total annual cost per patron

All advisory committees (a complete listing of advisory committee members is included in the Appendix of the Hennepin County Comprehensive LRT System Plan, June 1988) supported the multi-leg concept recommended in the Stage I System Plan. The multi-leg concept not only provides access to the downtown, but also permits inter-corridor trips to take place. It provides for maximum utilization of the most expensive part of the system, the downtown segment. Additionally, it makes light rail accessible to the greatest number of people in all areas of Hennepin County.

The Stage I Corridor segments which were identified in the Comprehensive LRT System Plan for Hennepin County included:

- o University Corridor--Downtown Minneapolis to Oak Street
- o Hiawatha Corridor--Downtown Minneapolis to 46th Street
- o I-35W Corridor--Downtown Minneapolis to 60th Street
- o Southwest--Downtown Minneapolis to County Road 18
- o Northwest--Downtown Minneapolis to 63rd Avenue

The Stage I System included construction of approximately thirty-two station sites. In addition, approximately 5,000 park-and-ride spaces are planned for construction.

The proposed Hennepin County LRT System is based on the corridors identified in the Stage I System. The I-35W South Corridor is not included because it is being studied under a separate Federal Highway Administration EIS. Chapter 3 will outline in detail the LRT Scoping Decision process which led to the amendments to the Stage I corridors.

2.2 REGIONAL TRANSPORTATION POLICIES, GOALS, AND OBJECTIVES

As the agency responsible for regional planning in the Minneapolis-Saint Paul metropolitan area, the Metropolitan Council has developed regional goals to guide the development of the metropolitan area. These goals are the basis for regional policies and plans adopted by the Council and officially documented in the Metropolitan Development Guide.

Establishment of an overall transportation policy for the Minneapolis-Saint Paul metropolitan area is a key component of these regional goals, and the responsibility of the Metropolitan Council. As a chapter in the Metropolitan Development Guide, the Transportation section describes goals, policies, and plans for transportation, complementing the Council's direction in the Metropolitan Development and Investment Framework.

The Metropolitan Council recognizes and is sensitive to the important role that accessibility plays in maintaining healthy economic development in the region. The Council is also aware of the difficulty in maintaining existing levels of accessibility in the face of travel demand increases and as existing financial, social and environmental constraints increase. In an effort to address these issues, the Metropolitan Council has recently revised the Transportation Development Guide/Policy Plan.

The Transportation Guide chapter outlines projected forecasts up to the Year 2010, which could impact the transportation system in the metropolitan region. It also identifies transportation needs and goals, and describes potential transportation policies, as well as strategies for achieving these goals. The "Transit System Plan" section includes light rail transit as part of an integrated regional transit system (Figure 2.9).

The four major transportation goals identified in this document include the following four points:

1. The transportation system should be maintained and developed in a manner that contributes to the region's quality of life, furthers the coordination of the major regional systems, and supports economic development consistent with the Metropolitan Development and Investment Framework.
2. Existing transportation services and facilities should be managed, protected, adapted, reconstructed and reconfigured to satisfy travel demand, while making the most effective use of limited resources.
3. Transit should be strengthened--regular-route, paratransit, and ridesharing options--to maximize the people-carrying capacity of the transportation system; to serve needs of transit dependent people; to supplement the metropolitan highway system; to satisfy downtown-oriented travel; and to allow for intensified development.

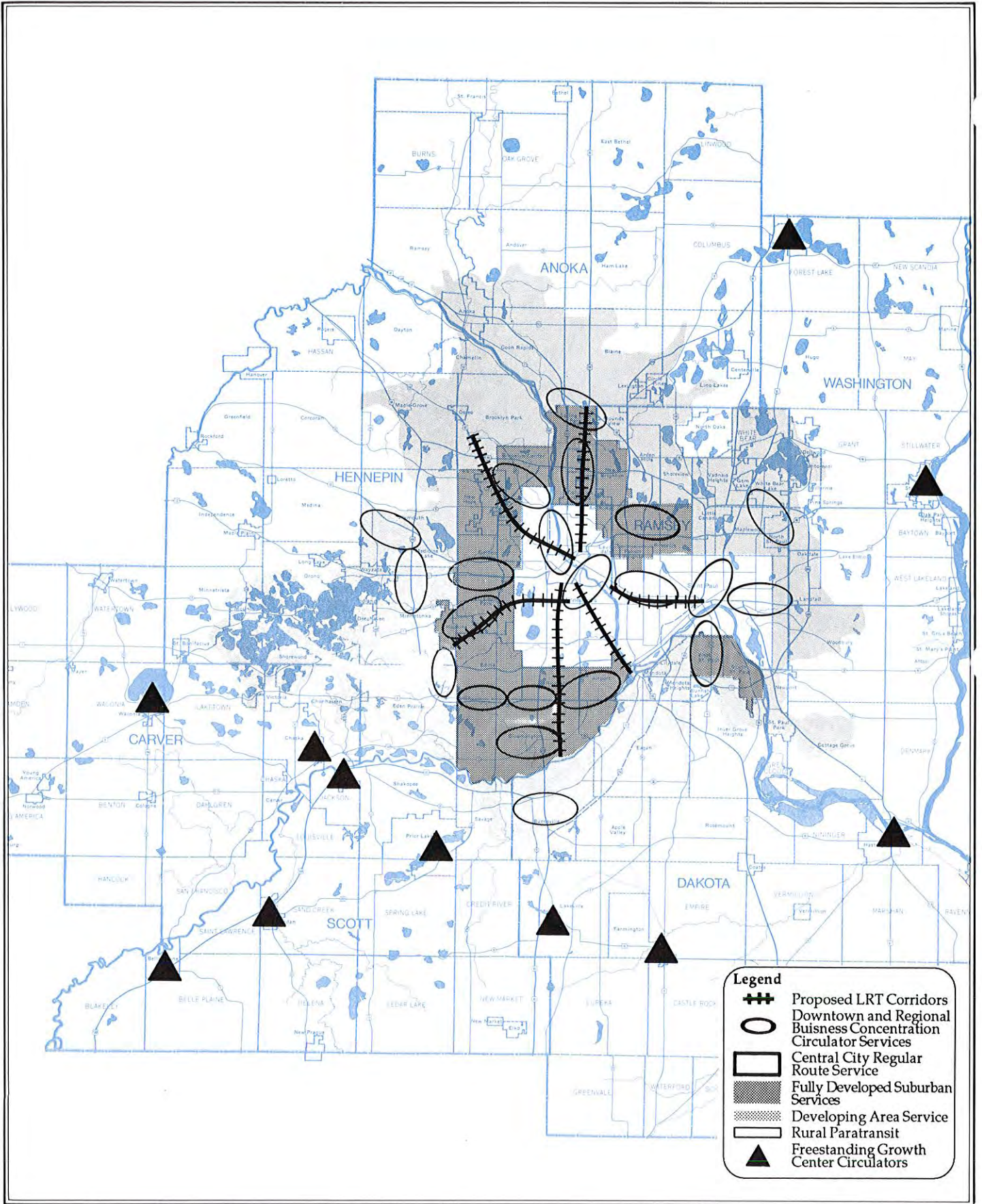


Figure 2.9

Metropolitan Transit System 2010

Source: Transportation Development Guide/Policy Plan, Metropolitan Council, February, 1989.

4. Funding levels and sources, including local and private funds, should be adequate and stable to ensure that appropriate investments are made in transportation facilities and services.

The transit component of the Policy Plan is composed of a series of policies, the Transit System Plan and specific guidelines for the Regional Transit Board's planning documents. Emphasis is placed on developing systems which increase people-carrying capacity rather than vehicle-carrying capacity.

Portions of the transportation policies considered most significant to the proposed light rail transit project under study in this document are outlined below:

- Policy 1: The transportation system should contain strong and effective transit components.
- Policy 2: Investments in services and facilities should enhance the competitiveness of transit with single-occupant automobiles, particularly for commuters.
- Policy 3: Transit (among other methods) should be used to reduce the demand for roadway capacity during peak hours.
- Policy 4: Transit resources should be allocated to areas which have demonstrated or identifiable demand.
- Policy 5: Many different types of transit are appropriate within the Metropolitan area (light rail transit is specifically mentioned).
- Policy 6: All transit services and all other transportation services should be part of an integrated transportation system (all planned transportation services should be consistent with the Transportation Development Guide).
- Policy 7: Transit services should be supplied by both public sector and private sector providers, depending on which can do so most economically.
- Policy 8: Transit fares should be set to maintain competitiveness with private automobiles, while reflecting the cost of providing the service, and in consideration of the resources of low-income populations.

Policy 9: Short-range decisions regarding transit should reflect long-term strategies, goals and resources.

Policy 14: Comprehensive plans for metro cities should recognize the role of all transportation modes in serving the metro center and minimizing the investment required in transportation systems.

Policy 15: Planning for regional business concentrations should recognize the role of all transportation modes in serving that concentration and minimizing the investment required in transportation systems.

Policy 18: Public participation in formulation of transportation policy and implementation decisions is encouraged.

The Transit Policy Plan clearly suggests reduction of peak hour transportation demand and more efficient use of transportation resources. It can therefore be concluded that implementation of the Light Rail Transit System within Hennepin County would be consistent with the Transportation Development Guide/Policy Plan (1988).

2.3 PURPOSE OF LIGHT RAIL TRANSIT IN THE REGIONAL TRANSPORTATION SYSTEM

Based on the extensive studies completed to date regarding the need for and feasibility of constructing a light rail transit system in Hennepin County, it can be concluded that the implementation of an LRT system would yield the following benefits.

Transit Service

- o By developing an efficient feeder bus system to connect with the light rail lines, the total number of miles traveled by regular route buses in the light rail corridors would decrease by approximately 5,000 miles per weekday. This decrease in bus miles traveled would decrease the operating cost of the bus system.
- o Because the majority of the LRT system proposed for Hennepin County is located in private right-of-way (ROW), the light rail vehicle (LRV) can travel at higher operating speeds than regular route buses which are subject to roadway congestion. This increased speed in turn decreases the travel time for the transit user, and increases the schedule reliability of the system.

- o The light rail system would provide increased access for persons dependent on transit service. The light rail system would be handicapped-accessible at all of the proposed station locations. By providing a totally handicapped-accessible system, LRT could reduce the funds needed to provide special transit service in Hennepin County, which is projected to substantially increase during the 1988-2010 time period.
- o The light rail system would improve accessibility for transit users traveling from the central business district area to suburban employment centers.
- o The light rail system would provide an additional component to the existing regional transportation system. Local suburban regular route bus service could feed into the LRT lines to provide increased regional access.
- o The light rail system would improve the access to the Minneapolis-Saint Paul International Airport and events at the Metrodome. This in turn would decrease the demand for parking at both sites.
- o During the peak periods the light rail system would be equipped to carry more people in a more cost efficient manner than regular route bus service.

Economic Development

- o Ease of commuting is a factor considered by businesses when evaluating locations. The light rail transit system would improve the ease of commuting, particularly to the downtown area.
- o The light rail transit system would support and stimulate higher density development in the downtown area, without increasing the demand for parking and the congestion levels on highways and arterials serving the downtown.
- o The light rail transit system would support economic development near LRT stations. Because LRT stations have the potential to concentrate large volumes of transit users and consumers in a particular area, they can function as strong attractors to real estate development.

Traffic Operations

- o By providing a more attractive transit alternative to the regular route bus, the number of transit users in

the metropolitan area would increase, thereby decreasing the level of congestion on existing roadways.

- o The light rail transit system would substantially reduce the daily bus miles traveled and peak bus fleet requirements in each of the corridors. The reduced bus fleet size would reduce the competition for limited street capacity between cars and buses in downtown Minneapolis.

Environmental Benefit

- o The LRT System could reduce the amount of air pollution emitted by motor vehicles by providing an alternative mode of transportation and eliminating the need for some motor vehicle travel.
- o To the extent that LRT reduces motor vehicle travel, there will be a reduction in the amount of fossil fuel consumed for transportation in the metropolitan area.

2.4 NEED FOR PROPOSED ACTION

2.4.1 Transportation

During the time period from 1980 to 2010, the Metropolitan Council of the Twin Cities estimates that travel in the region will increase from 35 million to 57 million vehicle miles daily, a 63 percent increase. This anticipated increase is based on the following projections:

- o Projected 25 percent increase in population
- o Projected 37 percent increase in the number of households
- o Projected 41 percent increase in the number of jobs in the region
- o Projected 50 percent increase in vehicle trips per person
- o Projected 39 percent increase in car ownership

During the above-mentioned time period, the Metropolitan Council anticipates that due to financial, social and environmental costs associated with building and maintaining additional transportation capacity systems, traditional improvements to the region's existing transportation system will not be able to keep pace with the anticipated growth in travel.

2.4.2 Congestion

The 1988 Transportation Development Guide Policy Plan prepared by the Metropolitan Council stated that from 1972 to 1984 the number of freeway miles in the metropolitan area with severe congestion increased from 24 to 72. During this same time period, 59 miles of freeway/expressway were constructed. Of the regional roadway corridors currently serving downtown Minneapolis, congestion presently exists on I-35W both north and south of the Central Business District (CBD); on TH 12/I-394 west of downtown; and on I-94 east of downtown (Figure 2.10).

By the Year 2010, the Metropolitan Council projects that the number of congested freeway miles will reach 200. This substantial increase is due in part to the expected increase in the downtown workforce from approximately 120,000 people to 150,000 people. Traffic on the highways oriented to downtown Minneapolis is expected to increase by 100,000 to 150,000 vehicle trips per day, depending upon vehicle occupancy and transit use.

Congested mile projections for Year 2010 come at a time when the 590-mile highway system in the metropolitan area will be reaching the end of its twenty-year design life. Transportation funds previously used for construction will be focused on preservation and reconstruction of the current highway system.

Because of the social, political and financial costs associated with building additional roadway capacity, it will be extremely difficult for the metropolitan region to build its way out of congestion.

2.4.3 Funding

During the past twenty years, federal funds contributed to construction of 220 miles of interstate freeway in the metropolitan area, while state and local funds were responsible for 360 miles of freeway and expressway. Currently, the Minnesota Department of Transportation spends approximately \$140 million annually on maintenance, preservation and improving the 1,200 miles of state highways in the seven-county metropolitan area. The Metropolitan Council's Transportation Development Guide/Policy Plan, 1989, identifies metropolitan highway system improvements to the Year 2010 that would cost approximately \$2.1 billion. A complete list of these proposed projects is outlined in the Appendix.

2.4.4 Transit Service

Transit service is a key component to the regional transportation system. It provides access for people who must rely on transit because of age, economic or physical disability

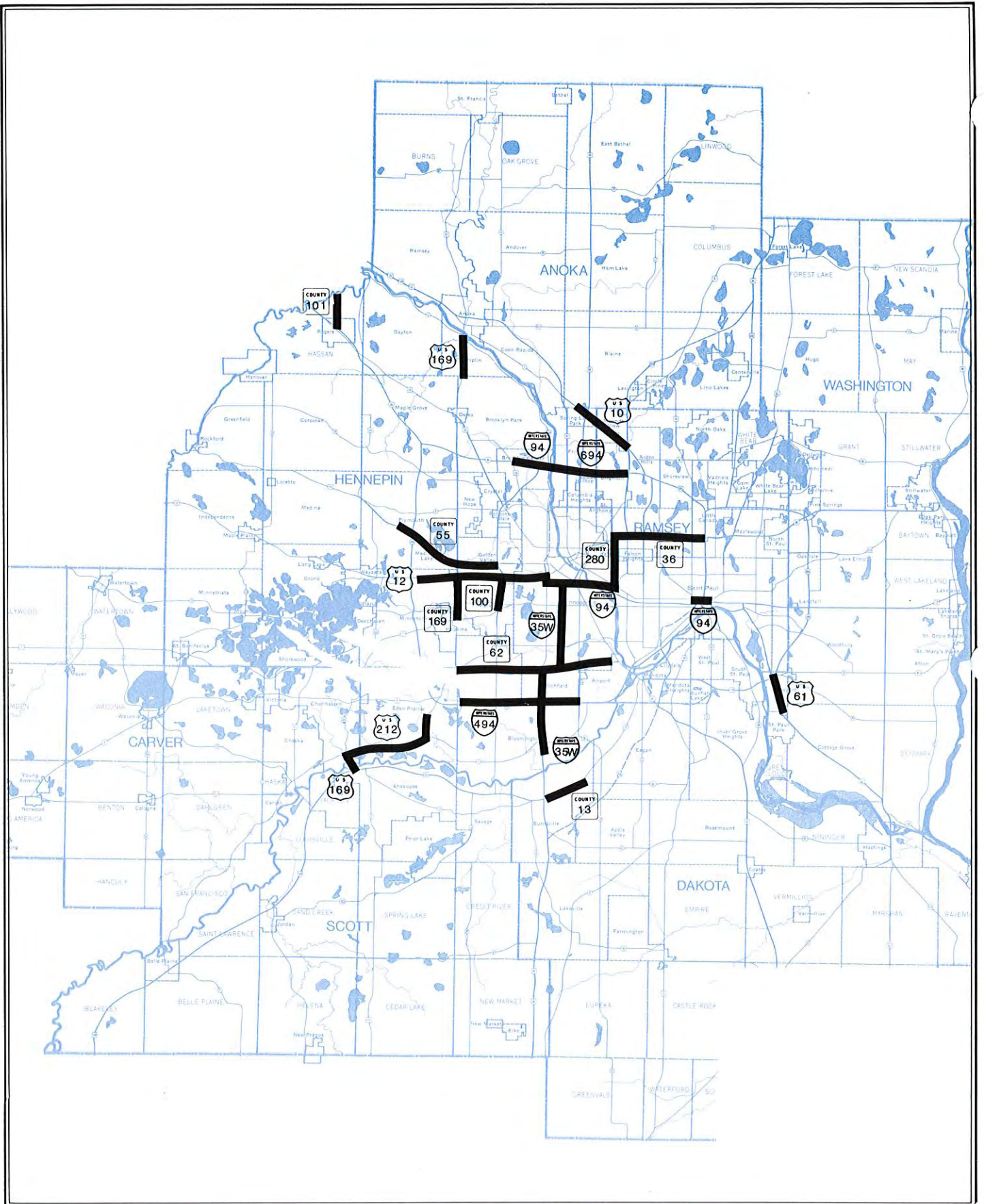


Figure 2.10

Highly Congested Corridors as of 1986 - 1987

reasons. Transit is also a means to increase the people-carrying capacity of the roadway system while decreasing dependence on the private automobile.

Between 1988 and 2010 there is a projected forty percent increase in people age 65 and over needing some type of transit service. This, in turn, will cause an estimated fifty percent increase in funding needed to provide special transit service to the elderly and disabled.

Based on 1987 Cordon Counts conducted by the City of Minneapolis, sixty-two percent of daily person-trips to downtown are made by automobile, twenty-two percent by bus, nine percent by pedestrians and seven percent by either taxi, truck, or bicycle. Ninety-three percent of CBD transit trips originate within eight miles of downtown. Given that the primary location of growth is outside the eight-mile ring of downtown--in the second and third ring suburbs--a range of innovative, accessible and high quality transit services will be needed to maintain the 20 to 25 percent figure of downtown destined travel utilizing transit.

During the time period of 1971 to 1980 (Figure 2.11A), the MTC bus ridership levels consistently increased to a high of approximately 95 million. Since 1980, bus ridership levels have decreased to the current level of 70 million annual riders. This decrease in bus ridership took place at a time when vehicle occupancy rates were also decreasing (Figure 2.11B).

The Metropolitan Transit System is experiencing declining ridership levels, rising maintenance costs, and pressure to expand transit service into newly developed areas. This comes at a time when the ability to fund transit system improvements has decreased because federal programs for funding of transit capital and operating costs are being reduced significantly.

2.4.5 Parking

Presently, downtown parking is considered adequate, but severe shortages are expected by the Year 2000, and by 2010, as a result of land use changes which will substantially increase the demand for parking. The shortage is projected to reach 8,300 spaces. The Year 2010 projection does not include the impact that an LRT System could have on parking demand.

At the same time that parking demand is increasing, there will be a reduction in the availability of land in the downtown area designated for parking.

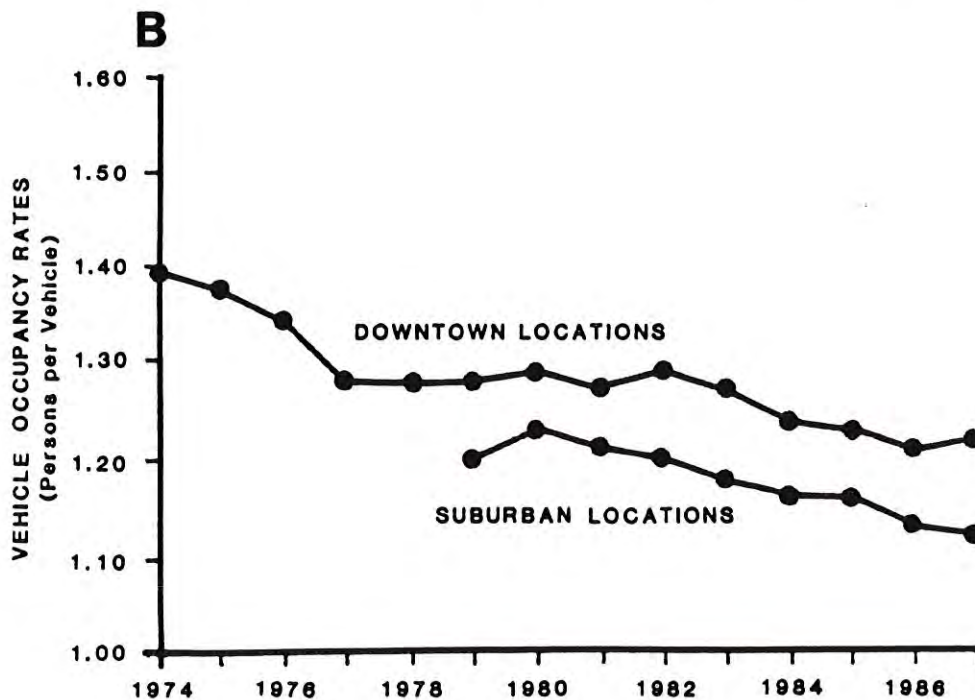
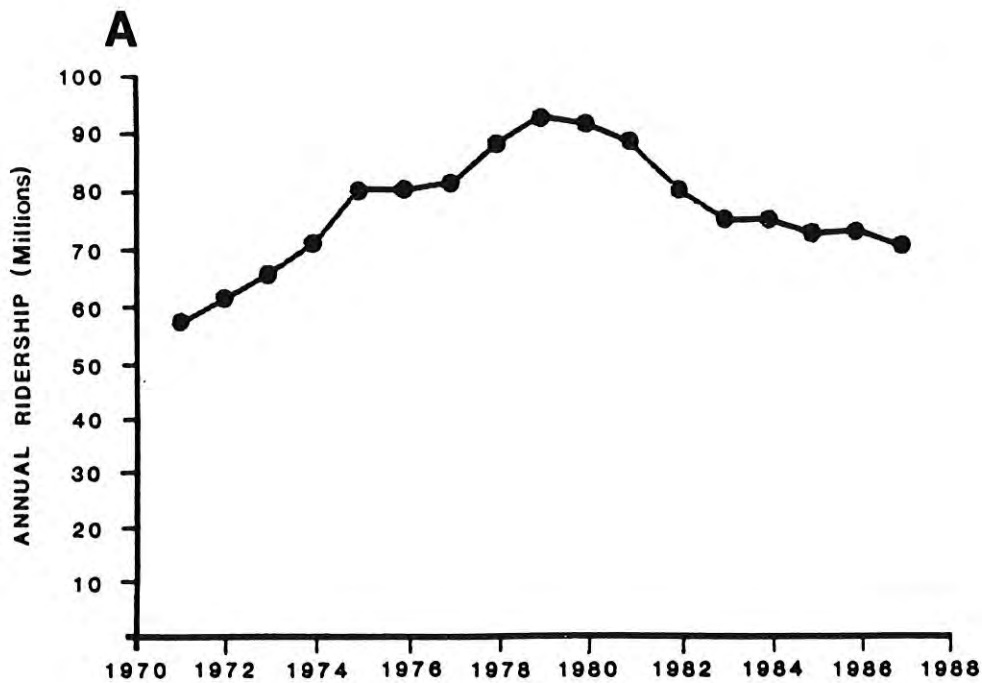


Figure 2.11

Annual Ridership and Vehicle Occupancy Rates

Source: Transportation Development Guide/Policy Plan, Metropolitan Council, February, 1989.